CONTENTS OF VOLUME 232

No. 1, May, 1958

PAGE

Swell, Leon, Trout, E. C., Jr., Hopper, J. R., Field, Henry, Jr., and Treadwell, C. R. Mechanism of cholesterol absorption. I. Endogenous dilution and esterification of fed cholesterol-4-C^{14} 1

Hoberman, Henry D. Coupling of oxidation of substrates to reductive biosyntheses. I. Evidence of substrate specificity in the reductive synthesis of triose phosphate 9

Armstrong, Marvin D., Shaw, Kenneth N. F., Gortatowski, J., and Singer, Herbert. The indole acids of human urine. Paper chromatography of indole acids 17

McCorquodale, D. J., and Mueller, Gerald C. Effect of estradiol on the level of amino acid-activating enzymes in the rat uterus 31

Merrifield, R. B. Competitive inhibition of a strepogenin-active peptide by related peptides 43

Ginsburg, V. Purification of uridinediphosphate glucose pyrophosphorylase from mung bean seedlings 55

Rapport, Maurice M., and Lerner, Bernard. A simplified preparation of sphingomyelin 63

Kinnear, A. M. G., Kelly, Kirsteen O., and Naismith, W. E. F. The interaction of sodium oleate with conarachin II 67

Jakoby, William B. Aldehyde oxidation. I. Dehydrogenase from *Pseudomonas fluorescens* 75

Jakoby, William B. Aldehyde oxidation. II. Evidence for closely juxtaposed sulfhydryl groups on dehydrogenases 89

Loo, Ti Li, and Michael, Marvin E. A colorimetric method for the determination of certain purine antagonists 99

Burns, J. J., Kanfer, Julian, and Dayton, Peter G. Metabolism of L-ascorbic acid in rat kidney 107

Zander, Josef. Steroids in the human ovary 117

Reed, Lester J., Leach, Franklin R., and Koike, Masahiko. Studies on a lipoic acid-activating system 123

Reed, Lester J., Koike, Masahiko, Levitch, Mark E., and Leach, Franklin R. Studies on the nature and reactions of protein-bound lipoic acid 143

Ravel, Joanne M., McCord, Tommy J., Skinner, Charles G., and Shive, William. *S*-Carbamyl-L-cysteine, an inhibitory amino acid analogue 159

Parks, L. W. *S*-Adenosylethionine and ethionine inhibition 169

Neuhaus, Otto W., and Letzring, Marcia. Hexosamine-containing glycoproteins of normal bovine synovial fluid 177

Spector, Leonard B., and Keller, Elizabeth B. Labile acetylated uracil derivatives 185

Haining, Joseph L., and Axelrod, Bernard. Induction period in the lipoxidase-catalyzed oxidation of linoleic acid and its abolition by substrate peroxide 193

Black, Arthur L., and Kleiber, Max. The transfer of carbon from propionate to amino acids in intact cows 203

XUM

SINGER, MAXINE F. Phosphorolysis of oligoribonucleotides by polynucleotide phosphorylase 211
WILLIAMS, WILLIAM J., and MANSON, LIONEL A. Glutaminase of the human malignant cell, strain HeLa 229
NODA, LAFAYETTE. Adenosine triphosphate-adenosine monophosphate transphosphorylase. III. Kinetic studies 237
BECK, WILLIAM S. The control of leukocyte glycolysis 251
BECK, WILLIAM S. Occurrence and control of the phosphogluconate oxidation pathway in normal and leukemic leukocytes 271
ROBERTS, PHYLLIS S. Measurement of the rate of plasmin action on synthetic substrates 285
AZARI, PARVIZ R., and FEENEY, ROBERT E. Resistance of metal complexes of conalbumin and transferrin to proteolysis and to thermal denaturation 293
DUDA, GEORGE D., and HANDLER, PHILIP. Kinetics of ammonia metabolism *in vivo* 303
ASHLEY, J. J., BROWN, B. T., OKITA, G. T., and WRIGHT, S. E. The metabolites of cardiac glycosides in human urine 315
MEHLER, ALAN H., MCDANIEL, E. G., and HUNDLEY, JAMES M. Changes in the enzymatic composition in liver. I. Increase of picolinic carboxylase in diabetes 323
MEHLER, ALAN H., MCDANIEL, E. G., and HUNDLEY, JAMES M. Changes in the enzymatic composition of liver. II. Influence of hormones on picolinic carboxylase and tryptophan peroxidase 331
GANGULI, N. C. Enzymatic formation of uridine diphosphate glucose with preparations from *Impatiens holstii* 337
STOKES, WILLIAM M., HICKEY, FREDERICK C., O. P., and FISH, WILLIAM A. Sterol metabolism. I. The occurrence of desmosterol (24-dehydrocholesterol) in rat skin and its conversion *in vivo* to cholesterol 347
CONIGLIO, JOHN G., and CATE, DEBORAH L. The distribution and biosynthesis of palmitic and stearic acids in liver, intestine, and carcass of intact normal and fasted rats 361
KLINGMAN, JACK D., and HANDLER, PHILIP. Partial purification and properties of renal glutaminase 369
HASH, JOHN H., and KING, KENDALL W. On the nature of the β-glucosidases of *Myrothecium verrucaria* 381
HASH, JOHN H., and KING, KENDALL W. Some properties of an aryl-β-glucosidase from culture filtrates of *Myrothecium verrucaria* 395
AKAZAWA, T., and CONN, ERIC E. The oxidation of reduced pyridine nucleotides by peroxidase 403
MACKENZIE, COSMO G., and FRISELL, WILHELM R. The metabolism of dimethylglycine by liver mitochondria 417
ISSELBACHER, KURT J. A mammalian uridinediphosphate galactose pyrophosphorylase 429
JACOBS, FRANCIS A., and HILLMAN, R. S. LYLE. Intestinal absorption of the methionine isomers as affected by deoxypyridoxine 445
HOCH, FREDERIC L., WILLIAMS, ROBERT J. P., and VALLEE, BERT L. The role of zinc in alcohol dehydrogenases. II. The kinetics of the instantaneous reversible inhibition of yeast alcohol dehydrogenase by 1,10-phenanthroline .. 453
WILLIAMS, ROBERT J. P., HOCH, FREDERIC L., and VALLEE, BERT L. The role of zinc in alcohol dehydrogenases. III. The kinetics of a time-dependent inhibition of yeast alcohol dehydrogenase by 1,10-phenanthroline 465

STETTEN, MARJORIE R., KATZEN, HOWARD M., and STETTEN, DEWITT, JR. A comparison of the glycogens isolated by acid and alkaline procedures.... 475
STETTEN, MARJORIE R., and STETTEN, DEWITT, JR. Influence of molecular size of glycogen on the phosphorylase reaction..... 489
LOEWUS, FRANK A., and JANG, ROSIE. The conversion of C^{14}-labeled sugars to L-ascorbic acid in ripening strawberries. II. Labeling patterns in the free sugars..... 505
LOEWUS, FRANK A., and JANG, ROSIE. The conversion of C^{14}-labeled sugars to L-ascorbic acid in ripening strawberries. III. Labeling patterns from berries administered pentose-1-C^{14}..... 521
LOEWUS, FRANK A., JANG, ROSIE, and SEEGMILLER, C. G. The conversion of C^{14}-labeled sugars to L-ascorbic acid in ripening strawberries. IV. A comparative study of D-galacturonic acid and L-ascorbic acid formation..... 533
OERTEL, GEORG W., and EIK-NES, KRISTEN. Determination of dehydroepiandrosterone in human blood plasma..... 543
KENT, ALAN B., KREBS, EDWIN G., and FISCHER, EDMOND H. Properties of crystalline phosphorylase *b*..... 549
WOLIN, M. J., SIMPSON, F. J., and WOOD, W. A. Degradation of L-arabinose by *Aerobacter aerogenes*. III. Identification and properties of L-ribulose-5-phosphate 4-epimerase..... 559
GOLDFINE, HOWARD, KOPPELMAN, RAY, and EVANS, E. A., JR. Nucleoside incorporation into HeLa cells infected with poliomyelitis virus..... 577

No. 2, JUNE, 1958

MILLS, GORDON C., and RANDALL, HARVEY P. Hemoglobin catabolism. II. The protection of hemoglobin from oxidative breakdown in the intact erythrocyte..... 589
ALEXANDER, GEORGE J., GOLD, ALLEN M., and SCHWENK, ERWIN. Biogenesis of yeast sterols. III. The origin of carbon 28 of ergosterol..... 599
ALEXANDER, GEORGE J., and SCHWENK, ERWIN. Biogenesis of yeast sterols. IV. Transmethylation in ergosterol synthesis..... 611
DOCTOR, V. M. Studies on the inhibitory nature of pteridines..... 617
GLASER, LUIS. The synthesis of cellulose in cell-free extracts of *Acetobacter xylinum*..... 627
GOULD, BERNARD S. Biosynthesis of collagen. III. The direct action of ascorbic acid on hydroxyproline and collagen formation in subcutaneous polyvinyl sponge implants in guinea pigs..... 637
ZAMENHOF, STEPHEN, RICH, KENNETH, and DE GIOVANNI, ROSALIE. Further studies on the introduction of pyrimidines into deoxyribonucleic acids of *Escherichia coli*..... 651
YANG, WILLIAM C., YANASUGONDHA, DAVI, and WEBB, J. LEYDEN. The inhibition of mitochondrial respiration by 1,10-phenanthroline and 2,2′-bipyridine and the possible relationship to oxidative phosphorylation..... 659
CATRAVAS, G. N., and ANKER, H. S. On the restoration of fatty acid biosynthesis after fasting..... 669
CARTER, HERBERT E., SMITH, DONALD B., and JONES, D. N. A new ethanolamine-containing lipide from egg yolk..... 681
COOPERSTEIN, S. J., and LAZAROW, ARNOLD. Alloxan inactivation of coenzyme A and the pigeon liver acetylating enzyme..... 695

RECKNAGEL, RICHARD O., and MALAMED, SASHA. The osmotic nature of Mitochondrial swelling produced by carbon tetrachloride and inorganic phosphate 705
SCHWIMMER, SIGMUND. Influence of polyphenols and potato components on potato phosphorylase 715
WOTIZ, HERBERT H., SIE, HSIEN-GIEH, and FISHMAN, WILLIAM H. Studies in steroid metabolism. VII. Characterization of biosynthetic testosterone glucosiduronic acid as methyl-[(testosterone-17β-)-2,3,4-tri-*O*-acetyl-β-D-glucopyranosid]-uronate 723
FISHMAN, WILLIAM H., and LIPKIND, J. B. Comparative ability of some steroids and their esters to enhance the renal β-glucuronidase activity of mice 729
HICKMAN, JEAN, and ASHWELL, GILBERT. Purification and properties of D-xylulokinase in liver 737
LEVIN, HERMAN W., and WEINHOUSE, SIDNEY. Immediate effects of insulin on glucose utilization in normal rats 749
POGELL, BURTON M. Enzymatic oxidation of pyridoxamine phosphate to pyridoxal phosphate in rabbit liver 761
STEWART, ROBERT A., PLATOU, ELLY, and KELLY, VINCENT J. The alkaline phosphatase content of human milk 777
DUTCHER, JAMES D. Aspergillic acid: an antibiotic substance produced by *Aspergillus flavus*. III. The structure of hydroxyaspergillic acid 785
VAN SLYKE, DONALD D., and SINEX, F. MAROTT. The course of hydroxylation of lysine to form hydroxylysine in collagen 797
COMB, DONALD G., and ROSEMAN, SAUL. Glucosamine metabolism. IV. Glucosamine-6-phosphate deaminase 807
MACLEOD, ROBERT A., CLARIDGE, C. A., HORI, AIKO, and MURRAY, J. F. Observations on the function of sodium in the metabolism of a marine bacterium 829
AXELROD, JULIUS, INSCOE, JOSEPH K., and TOMKINS, GORDON M. Enzymatic synthesis of *N*-glucosyluronic acid conjugates 835
LUDDY, FRANCIS E., BARFORD, R. A., RIEMENSCHNEIDER, ROY W., and EVANS, JOHN D. Fatty acid composition of component lipides from human plasma and atheromas 843
ROTHERHAM, JEAN, and SCHNEIDER, WALTER C. Deoxyribosyl compounds in animal tissues 853
BODANSKY, OSCAR. Assay of tissue phosphoglucomutase activity 859
STEIN, ERIC A., and FISCHER, EDMOND H. The resistance of α-amylases towards proteolytic attack 867
KRINSKY, NORMAN I. The enzymatic esterification of vitamin A 881
BAER, ERICH, and BUCHNEA, DMYTRO. Synthesis of saturated and unsaturated phosphatidyl glycerols. III. Cardiolipin substitutes 895
NOLL, HANS, and JACKIM, EUGENE. The chemistry of the native constituents of the acetone-soluble fat of *Mycobacterium tuberculosis* (Brevannes). I. Glycerides and phosphoglycolipides 903
NOLL, HANS. The chemistry of the native constituents of the acetone-soluble fat of *Mycobacterium tuberculosis* (Brevannes). II. Isolation and properties of a new crystalline naphthoquinone derivative related to vitamin K_2. 919
BECK, WILLIAM S., and OCHOA, SEVERO. Metabolism of propionic acid in animal tissues. IV. Further studies on the enzymatic isomerization of methylmalonyl coenzyme A 931

TONG, WINTON, and CHAIKOFF, I. L. Hydrolysis of I^{131}-thyroprotein by pancreatic enzymes 939
RIEDER, SIDNEY V., and BUCHANAN, JOHN M. Studies on the biological formation of glucosamine *in vivo*. I. Origin of the carbon chain 951
RIEDER, SIDNEY V., and BUCHANAN, JOHN M. Studies on the biological formation of glucosamine *in vivo*. II. Origin of the nitrogen atom 959
PRESSMAN, BERTON C. Intramitochondrial nucleotides. I. Some factors affecting net interconversions of adenine nucleotides 967
BUELL, MARY V., LOWRY, OLIVER H., ROBERTS, NIRA R., CHANG, MEI-LING WU, and KAPPHAHN, JOYCE I. The quantitative histochemistry of the brain. V. Enzymes of glucose metabolism 979
LYNN, WILLIAM S., JR., BROWN, ROSE H., and MULLINS, JOHN. Catalytic and adsorptive properties of testicular microsomes 995
LYNN, WILLIAM S., JR., and BROWN, ROSE H. Effects of Amphenone B on the enzymatic properties of testicular microsomes 1005
LYNN, WILLIAM S., JR., and BROWN, ROSE H. The conversion of progesterone to androgens by testes 1015
ROSENBERG, ABRAHAM, and CHARGAFF, ERWIN. A study of a mucolipide from ox brain 1031
SWARTZ, MORTON N., KAPLAN, NATHAN O., and LAMBORG, MARY F. A "heat-activated" diphosphopyridine nucleotide pyrophosphatase from *Proteus vulgaris* 1051
RALL, T. W., and SUTHERLAND, EARL W. Formation of a cyclic adenine ribonucleotide by tissue particles 1065
SUTHERLAND, EARL W., and RALL, T. W. Fractionation and characterization of a cyclic adenine ribonucleotide formed by tissue particles 1077
NEUFELD, HAROLD A., GREEN, LONZO F., LATTERELL, FRANCES M., and WEINTRAUB, ROBERT L. Thiooxidase, a new sulfhydryl-oxidizing enzyme from *Piricularia oryzae* and *Polyporus versicolor* 1093
GRANICK, S. Porphyrin biosynthesis in erythrocytes. I. Formation of δ-aminolevulinic acid in erythrocytes 1101
GRANICK, S., and MAUZERALL, D. Porphyrin biosynthesis in erythrocytes. II. Enzymes converting δ-aminolevulinic acid to coproporphyrinogen 1119
MAUZERALL, D., and GRANICK, S. Porphyrin biosynthesis in erythrocytes. III. Uroporphyrinogen and its decarboxylase 1141
INDEX TO VOLUME 232 1163